

ABSTRACT:



The nanowire (10) comprises a first region (1), a second region (2), and a third region (3), wherein the diameter (c) of the second region (2) is greater than the diameters (a) of the first and the third region (1,3), therewith interrupting at least partially the quantization of the nanowire (10) and giving the second region a smaller bandgap. The second region (2) has a length (b) in axial direction of less than 100 nm, preferably less than 20 nm. The nanowire (10) can be used in an (opto-)electronic device having electrodes as a quantum dot, a single-electron transistor, or the like.

Fig. 1